Date: Sun, 1 May 94 04:30:12 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #128
To: Ham-Ant

Ham-Ant Digest   Sun, 1 May 94   Volume 94 : Issue 128

Today's Topics:

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sat, 30 Apr 94 02:52:09 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!vixen.cso.uiuc.edu!uchinews!
iitmax!news@network.ucsd.edu
Subject: 2m 'Tenna for Apartment
To: ham-ant@ucsd.edu

OK, I live in an apartment. I think I can thread a coax out through my wall
mounted air conditioner and out onto my 2nd-floor balcony.

What would you recommend for a good "stealth antenna" in this situation?

(My gut feeling is to use a center-fed vertical wire dipole)

Thanks!

N9THH
cmsmandelin@harpo.acc.iit.edu

Arthur M. Mandelin, II   ("The Artation")   CMSMANDELIN@harpo.acc.iit.edu
"...grey would be the color, if i had a heart."
     -- nine inch nails, "something i can never have" (pretty hate machine)

Date: Sat, 30 Apr 1994 21:12:55 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
draziw@network.ucsd.edu
Subject: 2m 'Tenna for Apartment
To: ham-ant@ucsd.edu

The Artation (CMSMANDELIN@minna.acc.iit.edu) wrote:
: OK, I live in an apartment. I think I can thread a coax out through my wall
: mounted air conditioner and out onto my 2nd-floor balcony.

: What would you recommend for a good "stealth antenna" in this situation?

: (My gut feeling is to use a center-fed vertical wire dipole)

Welp, one way is to plant a copper J-pole - have a copper cactus, put it
in a planter on the 2nd floor balcony, and if anyone asks, it's a novelty
item. Is the balcony rail metal or wood? If it's metal and you can get
away with being less stealth, get a short mag-mount, wrap the coax around
the rail once and then stick it on - it's a FM antenna for your stereo.
:) you could also put up a small antenna tieing some fishing line to the
top and hang it from something above it - put a couple ceramic or other
beads around it (tieing them above too) - it's not an antenna, it's a
wind chime.. :> Good luck with your antenna.

Ryan draziw@netcom.com

Date: Sun, 1 May 1994 00:00:49 GMT
From: ihnp4.ucsd.edu!usc!elroy.jpl.nasa.gov!grian!pelican!ent-img.com!wb6hqk!
bart@network.ucsd.edu
Subject: 2m 'Tenna for Apartment
To: ham-ant@ucsd.edu

In article <1994Apr30.025209.25205@iitmax.iit.edu>,
The Artation <CMSMANDELIN@minna.acc.iit.edu> wrote:
>OK, I live in an apartment. I think I can thread a coax out through my wall
>mounted air conditioner and out onto my 2nd-floor balcony.
>

>What would you recommend for a good "stealth antenna" in this situation?
>
I know several folks that have attached a standard 1/4 or 5/8 wave mobile antennas with magnet mounts to roof mounted air conditioners or vents. Not only is the installation trivial, it's the easiest to 'explain' to a upset apartment manager or landlord.

I was lucky when I lived in an apartment and was allowed to mount a 2M ringo ranger on the roof. It was cheap, had adequate performance and eventually expendable. Soon after installation a construction project next door permanently eliminated my roof access and I wished it had been a multiband contraption of some sort. That was nearly 20 years ago; these days there are numerous commercial multiband VHF/UHF antennas which look pretty benign to your average apartment manager and perform fairly well.

Plan Ahead!

bart wb6hqk

bart@wb6hqk.ent-img.com

Date: Sat, 30 Apr 1994 15:32:18 GMT
From: ihnp4.ucsd.edu!usc!math.ohio-state.edu!magnus.acs.ohio-state.edu!csn!yuma!galen@network.ucsd.edu
Subject: 2m Amplifier mounted at antenna?
To: ham-ant@ucsd.edu

In article <CotI1L.CK6@rd1.InterLan.COM> tavernin@sun1.interlan.com (Victor Tavernini) writes:
>In article <2ou099$kap@taco.cc.ncsu.edu>, nsyslaw@riogrande.acs.ncsu.edu (Lou Williams) writes:
>|> I was curious if anyone here has tried using a 2m amplifier
>|> mounted at the antenna, instead of at the rig.
>|> in my case the feedline is over 100'
>
>If the amp has a receive preamp built-in ... then mounting it at the
>antenna would improve the noise figure of your receive system.

I've thought about this for 432, but the problem of getting 12 volts at 10-20 amps to the top of the tower stops me. Running 120 VAC up to another supply makes for a large tower top box with more wind load.

>There is a good discussion of this in the Satellite Experimenter's
>Handbook (I think that's what the book is called :-) that is published
>by the ARRL.

Date: Sat, 30 Apr 1994 22:19:49 GMT
From: sybus.sybus.com!myrddin!tscs!daver!cypress.com!ral@uunet.uu.net
Subject: Manual Antenna Tuners
To: ham-ant@ucsd.edu

Hi Netters:

I am just about to pick up my FT840. Because this unit has no built-in antenna tuner, I would like to buy an external manual tuner. My antenna is going to be a vertical or a dipole or both, so a tuner capable of tuning wires is not necesaary although an unit which can handle both coax and wires will be perfect. Power-wise I am staying with the stock 100 Watts for at least a couple of years.

MFJ has a wide selection of tuners. Most of them appear to have similar features. I have also read about tuners with inductor taps vs tuners with continuously adjustable inductors. The latter one is more expense. Are they worth the extra cost? I also read from some where that MFJ's quality left something to be desired.

I hope you can share you wisdom and expereince with me. Thanks in advance!

Ray Leong
WB7COG

Date: Sat, 30 Apr 1994 04:40:46 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!gatech!asuvax!pitstop.mcd.mot.com!mcdphx!schbbs!fl08ara010.comm.mot.com!user@network.ucsd.edu
Subject: vertical dipole
To: ham-ant@ucsd.edu

In article <2pqehh$dd0@ugle.unit.no>, kenneth@stud.unit.no (Kenneth Opskar) wrote:

> hi,
> I intend to set up a new antenna for 20-10 m, and wonder if anybody can tell
> me abt the performance of a vertical dipole compared to some other 'famous'
> verticals. How is this vertical dipole compared to a horisontal one ??
> I have very limited space and also want to use as light material as possible.
> How about setting up an off-center fed vertical dipole, instead of this
> center fed one ??

In years past when I have been short on antenna space I have used a coax fed inverted-V at 40 meters and up with a typical apex angle of 25-30

degrees. I have found these antennas to be very effective and have had
much more success with them than verticals.

If you are extremely limited in space then the vertical is about the only
choice you have. But what do you think you are going to accomplish with a
vertical dipole as opposed to a base loaded antenna?
--
Don Burns   K4GHD
Plantation, Florida
epur01@email.mot.com

Date: Sat, 30 Apr 1994 20:47:19 GMT
From: ihnp4.ucsd.edu!agate!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
draziw@network.ucsd.edu
Subject: What mounts well on an Accord
To: ham-ant@ucsd.edu

I'm using the smallest Commet trunk lid-mount, with there pre-connectered
coax. -I don't remember the part numbers, but if you want I'll get them
(I still have the packages they came in.) The coax is probably 8X -
somewhere between 58 and 213. But at the end by the lip it goes to some
<real> small stuff, so it bends around the lid, without getting mashed
when you close the trunk. If you want more info lemme know.

Ryan   draziw@netcom.com

Date: Sat, 30 Apr 1994 21:03:37 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
draziw@network.ucsd.edu
Subject: Y'all are a shy bunch, aintcha'?
To: ham-ant@ucsd.edu

William Matt Watkins (wwatkins@whale.st.usm.edu) wrote:
: Surely ALL of you didn't fail to see the sarcasm in my last post where
: I asked advice on constructing a directional antenna. Did you?

: So what's the deal? Are you afraid to associate yourselves with
: someone who is ignorant of antennadom? Sorry, but if I knew
: very much about antennas I wouldn't be here asking for advice, now
: would I?

: So, let's try it again from scratch. How do I make an antenna
: for an AM or FM radio that is highly directional?

Welp, I didn't see your first post, but as you might have noticed, this sub is on amature radio antennas, not AM FM radio antennas. I don't think you will find someone here that will want to design you an antenna that they wouldn't use. If you want to make yourself antenna based on amature radio designs I'd recomend that you go to a library and look for a design for a 2m beam antenna, then modify it for the frequency you want on FM radio. Or - better yet, just buy one ready made - they are out there, and it sounds like you don't feel like doing leg work. Pick up a Radio Shack 15-1636 for $16.95. Or if you are want to go to an omnidirectional one you could go with a 15-1639 at $12.95. Good luck.

Ryan draziw@netcom.com

Date: 30 Apr 1994 22:44:13 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!kabuki.EECS.Berkeley.EDU!
kennish@network.ucsd.edu
Subject: Y'all are a shy bunch, aintcha'?
To: ham-ant@ucsd.edu

In article <2pslcp$24he@whale.st.usm.edu>,
William Matt Watkins <wwatkins@whale.st.usm.edu> wrote:
 (pseudo-snide comments removed)
>
>So, let's try it again from scratch. How do I make an antenna
>for an AM or FM radio that is highly directional?
>
>Follow-ups, e-mail or collect calls accepted.
>
>I hereby formally invite anyone who reads this to respond.
>
>God will smile upon you if you respond.

 I could use this part...
>
>Thanks, Wm. M. Watkins
>   (wwatkins@whale.st.usm.edu)

OK, when you say highly directional, what do you mean? Pencil beam? Also, WHY do you want this? To get rid of an interfering station? To get more antenna gain? You have to let us know, otherwise you aren't gonna get answers, but since you promised that God will smile upon me, I'll give it a shot.

Anyhow, let's take AM first.

Broadcast AM is is about 1 MHz, so the wavelengths are very long,
about 300 meters, so building a directional antenna becomes a
real pain (unless you own half of Montana). Now, it IS possible
to use a terminated longwire antenna to get some directivity,
but getting a narrow beam is difficult. Now, if you want
a sharp NULL (to get rid of an offending station), then you're
in luck. A ferrite rod antenna will not respond to a station
if the axis of the rod is pointing directly at the station.
In fact, this is how old AM direction finding equipment worked.
Getting any gain out of the antenna is probably not worth it
since the atmospheric noise is so high down in that band. Directional
antennas for transmit can be made on many acres of land using
a set of towers fed with a specific phasing between them to get
the proper pattern. This is why many AM radio stations have
more than one tower.

FM is much easier, since the wavelengths are around 3 meters.
The simplest directional antenna for FM is the Yagi. Visualize
a TV antenna -- it's a Yagi look-alike. TV antennas are broadbanded to
cover from 54 to 800 MHz so they have a very large ratio of element
lengths (front to back). A narrowband FM yagi has slightly shorter
elements in front and longer in back. More elements usually
imply a sharper beam and more directionality, and more gain.
Yagis also have good front to back ratios, so you can turn
the antenna so that an offending station is in back of the antenna.
You can use more than one Yagi, and phase them to get even more
gain. Again, you need to specify the specifics. A dish antenna
at 100 MHz is possible, though it would have to be quite large
to get any real gain over a Yagi. 50 to 100 feet.

You can also use a phased array of simple dipoles by putting
a known delay between the elements and summing the outputs.
By using constructive and destructive interference, you can get
tremendous gain. This is how flat panel radar dishes work.

Well, good luck.

Ken

End of Ham-Ant Digest V94 #128
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